

REMARKS

Claims 1-66 are pending in the application. Claims 1-14, 16-22, 24-41, 44-46, 50-63, 65 and 66 are rejected. Reconsideration is respectfully requested in light of the remarks below.

Request for Supervisory Examiner Review Pursuant to M.P.E.P. § 707.02:

Applicants note that this is the sixth Office Action in this application without any amendment having ever been made to claim 1. Applicants also note that this application has been pending for well over five years. Pursuant to M.P.E.P. § 707.02, Applicants request that a Supervisory Patent Examiner review this application “with a view to finally concluding its prosecution.” According to M.P.E.P. § 707.02, this application “should be carefully studied by the supervisory patent examiner and every effort should be made to terminate its prosecution.” As noted in Applicants’ remarks below, the application is clearly in condition for allowance. **If there are any questions concerning the allowability of the present application, Applicants’ undersigned attorney earnestly and urgently requests a telephone conference with the Supervisory Patent Examiner to expeditiously resolve any outstanding issues.** Applicants also note that according to M.P.E.P. § 707.02, this application “is to be considered ‘special’ by the examiner.” Applicants also strongly object to the “piecemeal examination” that has been applied to this application. *See* M.P.E.P. § 707.07(g).

Section 103(a) Rejections:

The Examiner rejected claims 1, 10, 13 - 14, 16-21, 24-26, 44-46, 50-53, 58-63, 65 and 66 under 35 U.S.C. § 103(a) as being unpatentable over Object Management Group (OMG) “Agent Technology (hereinafter “OMG”) in view of Buckle (U.S. Patent 2 332 288), claims 2-9, 11, 27-34, 36-41 and 54-57 as being unpatentable over OMG in view of Buckle and further in view of Ardissono (“An Agent Architecture for Personalized Web Stores” pages 182-189), claims 12 and 22 as being unpatentable of

OMG in view of Buckle and further in view of Edward (“Core Jini”), and claim 35 as being unpatentable over OMG in view of Buckle and Ardissono and further in view of Edward. Applicants respectfully traverse these rejections for at least the reasons presented below.

Regarding claim 1, OMG in view of Buckle fails to teach or suggest converting a current computation state of a process into a data representation language representation of the current computation state, where the computation state of the process comprises information about the execution state of the process within the first device.

Buckle discloses a method in which “it is possible to transmit *binary files or byte code* between agents. The byte code sent in a message may include byte code of an agent itself. Buckle’s agent enabling layer utilizes the CORBA Externalization service to record object and object states (i.e. an agent) as a stream of data” (Buckle, page 38, lines 12-14). Thus, Buckle teaches that the binary byte code of an agent may be included in a message from a location L1 to a location L2.

OMG teaches a “basic understanding of agents and agent-based technology”. The Examiner cites sections 3.4, 4.4.2, and 4.3.1 of OMG. However, the cited sections fail to describe converting a current computation state of a process into a data representation language representation of the current computation state. Section 3.4 merely describes various technologies that may be used to develop agents or agent-based technology, such as Java, C++, KQML, FIPA ACL, XML documents and Java serialization. Section 4.3.1 discusses the virtual existence or persistence of agents, such as agents being put to sleep and reawakened when required. Section 4.4.2 discusses the adaptation of mobile agents, such as optimization of protocols, compression of application data, and communicating with other adapting agents. The Examiner refers to OMG teaching, “convert[ing] data representation into another one”. However, section 4.4.2 is not describing converting a current computation state of a process into a data representation language representation of the current computation state. Instead, OMG teaches that agents may act as gateways

for “*application data, such as still images, video and audio, XML, etc.*” (italics added, OMG, section 4.4.2, page 27). Thus, OMG teaches that an agent may compress and convert application data, such as still images, video and the like for use with “mobile computing wireless wide area networks and anemic mobile terminals”. Nothing is mentioned in OMG regarding converting *a current computation state of a process into a data representation language representation of the current computation state*.

In the Response to Arguments, the Examiner asserts, “applicant just ignores the rest of the sentence ‘which convert from one data representation to another one’”, referring to section 4.4.2 of OMG. **However, as argued previously (and repeated above), section 4.4.2 of OMG teaches that agents may act as gateways for *application data, such as still images, video and the like***. It is the Examiner, not the Applicants, who is ignoring the actual teachings of the reference. OMG teaches that mobile agents may convert application data, such as still images and multimedia, which are “designed mainly to be handled using high performance desktop PC with high quality display”, to “bit-efficient data representations.” Nothing is mentioned or suggested regarding converting *a current computation state of a process into a data representation language representation of the current computation state*. Converting multimedia data using compression and content modification, as taught by OMG at section 4.4.2 does not teach or suggest the specific limitation of converting *a current computation state of a process into a data representation language representation of the current computation state*, as recited in claim 1.

As shown above, Buckle also fails to teach or suggest anything about converting *a current computation state of a process into a data representation language representation of the current computation state* and thus fails to overcome the above-mentioned deficiencies of OMG. Since neither OMG nor Buckle teaches or suggests converting a current computation state of a process into a data representation language representation of the current computation state, the combination of OMB and Buckle also fails to teach or suggest converting a current computation state of a process into a data representation language representation of the current computation state.

In the Response to Arguments, the Examiner also refers to section 3.4 of OMG asserting, “the communication agent language comprises KQML or FIPA ACL and represented as xml document”. However, regardless of whether OMG uses XML for other purposes, OMG, whether considered singly or in combination with Buckle, fails to teach or suggest converting a current computation state of a process into a data representation language representation of the current computation state, as discussed above. The fact that OMG’s communication agent language may utilize XML documents is irrelevant to Applicants’ argument.

Further in regard to claim 1, OMG in view of Buckle also fails to teach or suggest storing the data representation language representation of the current computation state of the process. The Examiner cites section 4.3.1 of OMG. However, as noted above, section 4.3.1 discusses the virtual existence or persistence of agents, such as agents being put to sleep and reawakened when required, but does not mention anything about a *data representation language representation of the current computation state*. As Buckle also fails to teach anything regarding a data representation language representation of a current computation state, Buckle fails to overcome OMG’s deficiency in this respect. Thus, the Examiner’s combination of OMG and Buckle fails to teach or suggest storing the data representation language representation of the current computation state of the process.

In the Response to Arguments, the Examiner again refers to section 4.3.1 of OMG, referring to OMG’s teachings regarding a store-and-forward message model. However, the cited section of OMG describes various messaging models used while an agent is asleep. OMG teaches that some agent systems “may need a full robust event-type [message] model with guaranteed message delivery” and that there may be message modules for “direct communication between two agents, for a store-and-forward approach, and for a publish-and-subscribe model.” OMG states, [s]ystem events may also be passed via messages or some other mechanism.” Thus, the cited passage of OMG is clearly describing message-passing models between agents. However, no mention is

made of storing a data representation language representation of a current computation state of a process, as recited in claim 1. A single general mention of a store-and-forward messaging model does not in any way teach or suggest the specific limitation of **storing the data representation language representation of the current computation state of the process.**

Additionally in regard to claim 1, OMG in view of Buckle fails to teach or suggest that **the data representation language representation of the current computation state of the process is configured for use in reconstituting the process and resuming execution of the process.** The Examiner cites sections 4.3.1 and 2.2.5 of OMG, but admits that OMG fails to teach a data representation language representation configured for use in reconstituting the process. The Examiner relies on Buckle, citing page 38, line 30- page 39, line 5. However, as noted above, OMG fails to teach converting a current computation state of a process into a data representation language representation of the current computation state. Section 4.3.1, as noted above, discusses the virtual existence or persistence of agents, such as agents being put to sleep and reawakened when required as well as messaging models used between agents, but does not mention anything about a *data representation language representation of the current computation state being configured for use in resuming execution of the process*. Section 2.2.5 of OMG describes mobile agents relocating to various platforms in order to better process data and information. However, section 2.2.5 does not mention anything about a data representation language representation of a current computation state being configured for use in resuming execution of the process. In fact, this section of OMG fails to mention anything about how an agent relocates to another platform.

Buckle, relied on by the Examiner to teach “the step of reconstitution [of] the process”, also fails to teach anything regarding a **data representation language representation of the current computation state** configured for use in reconstituting the process. Instead, Buckle teaches that the binary byte code of an agent may be included in a message from a location L1 to a location L2. The cited passage of Buckle makes no mention of a data representation language representation of a current computation state

configured for use in reconstituting the process. In fact, by definition, the byte code in Buckle is not a data representation language representation of the current computation state of a process. The Examiner has not cited any prior art that teaches a data representation language representation of a current computation state of a process configured for use in reconstituting the process and resuming execution of the process.

In the Response to Arguments, the Examiner again cites column 38, line 30 – page 39, line 5 and states, “Buckle teaches the data ... is configured for use in reconstituting the process and resuming execution of the process (re-constituting the byte stream back into an object resident in remote host ...)” (ellipsis and parenthesis by Examiner). However, the Examiner has failed to consider the specific language of Applicants’ claim. Claim 1 recites, in part, “wherein the data representation language representation of the current computation state of the process is configured for use in reconstituting the process and resuming execution of the process” (emphasis added). As described above, Buckle teaches that the binary byte code of an agent may be included in a message from a location L1 to a location L2. Buckle, whether considered alone or in combination with OMG, does not teach or suggest that a data representation language representation of a current computation state of a process may be configured for use in reconstituting the process.

The Examiner’s combination of OMG and Buckle clearly fails to teach or suggest that the data representation language representation of the current computation state of the process is configured for use in reconstituting the process and resuming execution of the process, as recited in Applicants’ claim 18.

Thus, the rejection of claim 1 is not supported by the cited prior art and removal thereof is respectfully requested. Similar remarks apply to claim 51.

In regard to claim 19, OMG in view of Buckle fails to teach or suggest converting a current computation state of the process into a data representation language representation of the current computation state. Please refer to the remarks above

regarding the rejection of claim 1 for a detailed discussion regarding OMG and Buckle, whether considered singly or in combination, failing to teach or suggest converting a current computation state of the process into a data representation language representation of the current computation state.

Additionally, OMG in view of Buckle fails to teach or suggest sending the data representation language representation of the current computation state of the process to a second device. The Examiner cites sections 3.4, 4.1.1, 4.4 and 4.6.2 of OMG contending that OMG's mobile agents carry XML-based messages to a new host. However, contrary to the Examiner's assertion, none of the cited passages describes sending a data representation language representation of the current computation state of the process to a second device. Instead, section 3.4 describes various technologies that may be used to develop agents or agent-based technology, such as Java, C++, KQML, FIPA ACL, XML documents and Java serialization. Section 4.6.2 describes messaging issues, such as avoiding message alteration or disclosure by using authentication and/or encryption. Section 4.4 teaches that mobile agents "can pick up and move their code to a new host where they resume executing." However, section 4.4 of OMG clearly does not mention sending a data representation language representation of a current computation state of a process to a second device. At section 4.1.1 OMG teaches that communication and/or interaction between agents may be XML-based. However, XML-based communication and interaction between agents is very different from sending a data representation language representation of a current computation state of a process to a second device. Buckle is not relied on by the Examiner in the rejection of claim 19, nor does Buckle teach or suggest sending a data representation language representation of a current computation state of a process to a second device. Thus, the Examiner's combination of OMG and Buckle fails to teach or suggest sending a data representation language representation of a current computation state of a process to a second device.

In the response to Arguments, the Examiner asserts, "Buckle teaches sending the data representation language ... to a second device (message passing using the communication languages represented in XML documents ...), citing sections 3.4, 4.1.1,

4.4, and 4.6.2. However in the rejection of claim 19, the Examiner clearly relies on OMG, citing sections 3.4, 4.1.1, 4.4, and 4.6.2 of OMG. Buckle does not include sections numbers as cited. Presumably the Examiner intended to rely on Buckle in the Response to Arguments as well. Thus, the Examiner's response is merely a repetition of the rejection of claim 19 and fails to address any of Applicants specific arguments. For example, as noted above, none of the cited passages mentions sending a data representation language representation of a current computation state of a process to a second device. Despite the fact that OMG is complete silent regarding sending a data representation language representation of a current computation state, the Examiner has not provided any explanation or interpretation to support the assertion that OMG's system includes sending a data representation language representation of a current computation state of a process to a second device.

OMG in view of Buckle also fails to teach or suggest reconstituting the process at the current computation state within the second device **from the data representation language representation** of the current computation state of the process. The Examiner admits that OMG fails to teach reconstituting a process, but relies upon Buckle, citing page 38, line 30- page 39, line 5. However, Buckle teaches that the binary byte code of an agent may be included in a message from a location L1 to a location L2. Buckle does not mention anything regarding reconstituting the process from the data representation language representation. Since neither OMG nor Buckle teaches or suggests reconstituting the process at the current computation state within the second device from the data representation language representation of the current computation state of the process, the Examiner's combination of OMG and Buckle also fails to teach or suggest this functionality.

Thus, the rejection of claim 19 is not supported by the cited prior art and removal thereof is respectfully requested. Similar remarks apply to claims 44 and 61.

Regarding claim 9, OMG in view of Buckle in further view of Ardissono fails to teach or suggest converting a current computation state of the process into a data representation language representation of the current computation state. As noted above, regarding claim 1, OMG and Buckle, whether considered singly or in combination, fails to teach or suggest converting a current computation state of the process into a data representation language representation of the current computation state. Please refer to the remarks above regarding claim 1 for a more detailed discussion of OMG and Buckle's failure to teach or suggest converting a current computation state of the process into a data representation language representation of the current computation state. Ardissono teaches an architecture for a configurable Web store that exploits user modeling and flexible hypermedia techniques to tailor to the user the suggestion of goods and the description of the store catalog. Ardissono does not teach or suggest anything regarding converting a current computation state of the process into a data representation language representation of the current computation state. Thus, Ardissono does not overcome the deficiencies of OMG and Buckle regarding converting a current computation state of the process into a data representation language representation of the current computation state. Thus, the Examiner's combination of OMG, Buckle and Ardissono clearly fails to teach or suggest converting a current computation state of the process into a data representation language representation of the current computation state.

Further in regard to claim 9, the Examiner's combination of OMG, Buckle and Ardissono also fails to teach or suggest storing the data representation language representation of the current computation state of the process. Please refer to the remarks above regarding claim 1 for a more detailed discussion of the failure of OMG and Buckle, whether considered singly or in combination, to teach or suggest storing the data representation language representation of the current computation state of the process. Ardissono also fails to teach or suggest anything about storing a data representation language representation of the current computation state of a process. Thus, the Examiner's combination of OMG, Buckle and Ardissono does not teach or suggest

storing the data representation language representation of the current computation state of the process.

Further in regard to claim 9, OMG in view of Buckle and in further view of Ardissono fails to teach or suggest wherein the data representation language representation of the current computation state of the process is configured for use in reconstituting the process and resuming execution of the process. Please refer to the remarks above regarding claim 1 for a more detailed discussion of OMG and Buckle's failure to teach or suggest a data representation language representation configured for use in reconstituting the process and resuming execution of the process. Ardissono also fails to teach or suggest a data representation language representation configured for use in reconstituting the process and resuming execution of the process and thus fails to overcome the above-noted deficiencies of the combination of OMG and Buckle regarding a data representation language representation configured for use in reconstituting the process and resuming execution of the process.

Furthermore, in regard to claim 9, OMG in view of Buckle in further view of Ardissono fails to teach or suggest generating an advertisement for the data representation language representation of the current computation state of the process, wherein the advertisement comprises information to enable access to the stored data representation language representation. The Examiner cites the abstract, introduction and section 2.5 of Ardissono and refers to Ardissono's teachings regarding generating HTML code for an advertisement page for a product being posted on the catalog of the web. However, Ardissono is not concerned with, nor does Ardissono mention anything regarding, generating an advertisement for a data representation language representation of a current computation state of a process. Instead, Ardissono teaches a Personalization Agent that "requests the data of the user profile" and "applies a set of personalization rules which, on the bases of the user profile, suggest the page layout and the amount of surface form of the page contents." Thus, in Ardissono's system, "different pages are produced when describing the same product to users characterized by different profiles." Ardissono is concerned with personalizing product advertising, such as for "Super Slim

phones”. Ardissono has nothing to do with advertisements for data representation language representation of a current computation state of a process, where the advertisement includes information to enable access to a stored data representation language representation (of the current computation state of the process). Thus, the Examiner’s reliance on the teachings of Ardissono is misplaced. Moreover, no combination of OMG, Buckle and Ardissono would include generating an advertisement for the data representation language representation of the current computation state of the process.

Additionally in regard to claim 9, OMG in view of Buckle in further view of Ardissono fails to teach or suggest wherein the advertisement for the data representation language representation of the current computation state of the process is stored to a space using a space service, where the space is operable to store documents including advertisements in the distributed computing environment. The Examiner admits, regarding claim 2, that OMB and Buckle do not teach or suggest a space service operable to store and retrieve documents to the space for processes in the distributed computing environment and relies upon Ardissono, citing section 2. The cited section describes various agents, such as a session manager, dialog manager, user modeling component, product extractor, personalization agent, and a shopping cart manager. However, the cited section fails to mention anything about an advertisement for a data representation language representation of a current computation state of a process being stored to a space using a space service. The Examiner has not cited any portion of prior art, nor offered any interpretation of the cited prior art, that teaches or suggests an *advertisement for a data representation language representation* of a current computation state *stored to a space using a space service*.

For at least the reasons above, the rejection of claim 9 is not supported by the cited prior art and removal thereof is respectfully requested. Similar remarks also apply to claim 57.

Regarding claim 27, OMG in view of Buckle in further view of Ardissono fails to teach or suggest a device configured to convert a current computation state of a process into a data representation language representation of the current computation state. The Examiner relies upon OMG, citing sections 3.3.6, 3.4, 4.1.1 and 4.4.2. Please refer to the remarks regarding claim 1 above for a more detailed discussion regarding OMG's (and Buckle's) failure to teach or suggest converting a current computation state of a process into a data representation language representation of the current computation state. Please also refer to the remarks regarding claim 9 above for a discussion of OMG's, Buckle's, and Ardissono's failure to teach or suggest converting a current computation state of a process into a data representation language representation of the current computation state.

Further in regard to claim 27, OMG in view of Buckle in further view of Ardissono fails to teach or suggest a device configured to send the data representation language representation of the current computation state of the process to the space service. The Examiner cites section 4.4 of OMG asserting that OMG's teachings regarding mobile agents carrying XML-based messages to the new host. However, section 4.4 does not teach anything regarding sending a data representation language representation of a current computation state of the process. Using XML-based messages is quite different from sending a data representation language representation of a current computation state of a process. The Examiner also relies upon Buckle to teach a second device including a space service for storing messages, citing pages 38-39. However, Buckle does not teach or suggest sending a data representation language representation of the current computation state to a space service. Storing messages does not teach anything about storing a data representation language representation of the current computation state. Ardissono is not replied on by the Examiner to teach, nor does Ardissono teach anything regarding, a device configured to send the data representation language representation of the current computation state of the process to the space service. Thus, the combination of OMG, Buckle and Ardissono fails to teach or suggest a device configured to send the data representation language representation of the current computation state of the process to the space service.

For at least the reasons above, the rejection of claim 27 is not supported by the cited prior art and removal there of is respectfully requested.

Regarding claim 41, OMG in view of Buckle in further view of Ardissono fails to teach or suggest a device configured to convert a current computation state of a process into a data representation language representation of the current computation state. The remarks above regarding claims 1, 9, 19, and 27 about the failure of the cited art to teach or suggest converting a current computation state of a process into a data representation language representation of the current computation state also apply to claim 41.

Further in regard to claim 41, OMG in view of Buckle in further view of Ardissono fails to teach or suggest a device configured to store the data representation language representation of the current computation state of the process. The remarks and arguments above regarding claims 1 and 9 about the failure of the cited art to teach or suggest storing a data representation language representation of a current computation state of a process also apply to claim 41.

Further in regard to claim 41, OMG in view of Buckle in further view of Ardissono also fails to teach or suggest a device configured to generate an advertisement for the stored data representation language representation, wherein the advertisement includes information to enable access to the stored data representation language representation. The remarks and arguments above, regarding claim 9, about the failure of the cited art to teach or suggest generating an advertisement for the stored data representation language representation also apply to claim 41.

Further in regard to claim 41, OMG in view of Buckle in further view of Ardissono further fails to teach or suggest wherein the data representation language representation of the current computation state of the process is configured for use in reconstituting the process and resuming execution of the process. The remarks and arguments above, regarding claim 1, 9 and 19, about the cited art's failure to teach a data

representation language representation of the current computation state of the process configured for use in reconstituting the process and resuming execution of the process also apply to claim 41.

Thus, for at least the reasons above, the rejection of claim 41 is not supported by the cited prior art and removal thereof is respectfully requested.

Applicant also asserts that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the rejection has been shown to be unsupported for the independent claims, a further discussion of the dependent claims is not necessary at this time.

Allowed/Allowable Claims:

Claims 23, 42, 43, 47-49 and 64 are allowed. Claim 15 was objected to as depending upon a rejected base claim, but would be allowable if rewritten in independent form. In view of the above remarks, Applicants assert that claim 15 is in condition for allowance in its present form.

CONCLUSION

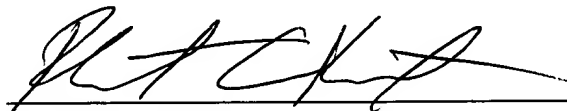
Applicants submit the application is in condition for allowance, and prompt notice to that effect is respectfully requested.

If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above-referenced application from becoming abandoned, Applicants hereby petition for such an extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-47200/RCK.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☐ Petition for Extension of Time
- ☐ Notice of Change of Address
- ☐ Other:

Respectfully submitted,



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